In The Claims:

Please amend claims 2 and 23 as follows:

1. (previously presented) A solar powered distillation system, comprising:

a basin; and

an extruded, molded or sprayed-on impermeable membrane for containment, said membrane lining the basin.

2. (presently amended) The solar powered distillation system of claim 1, wherein the impermeable membrane is comprised of nonporous silicone.

3. (previously presented) The solar powered distillation system of claim 2, wherein the silicone is U.S. Food and Drug Administration (FDA) food grade approved.

4. (previously presented) The solar powered distillation system of claim 2, wherein the membrane is an extruded silicone sheet cut, folded and adhesively attached to an inside surface of the basin so as to provide containment of a material to be distilled and vapors thereof that form during distillation.

5. (previously presented) The solar powered distillation system of claim 2, wherein the membrane is molded silicone that has been molded to line and form fit inside surfaces of the basin.

6. (previously presented) The solar powered distillation system of claim 2, wherein the membrane is sprayed-on silicone that adheres to and lines inside surfaces of the basin.

7. (previously presented) The solar powered distillation system of claim 4, wherein the silicone is black.

8. (previously presented) The solar powered distillation system of claim 1, wherein the basin is formed of an aluminum sided insulation sheet including an outside aluminum layer and an inside insulation layer, the aluminum layer being sufficiently thick to provide structural rigidity and durability as an outside surface of the basin and the membrane covers the insulation layer inside the basin.

9. (previously presented) The solar powered distillation system of claim 8, wherein the aluminum layer is bonded to the insulation layer.

10. (previously presented) The solar powered distillation system of claim 9, further comprising:

adjustable legs attached to said basin, said adjustable legs for supporting and leveling the distillation system to optimize the solar powered distillation system efficiency.

11. (original) The solar powered distillation system of claim 10, further comprising:

a carbon filter attached to an inlet or outlet of said solar power distillation system for removing various impurities.

12. (previously presented) A solar powered distillation system comprising:

a basin formed of an aluminum sided insulation, the aluminum being sufficiently thick to provide structural rigidity and durability to the basin.

13. (previously presented) The solar powered distillation system of claim 12, wherein the aluminum sided insulation includes an insulation layer made of polyisocyanurate.

14. (previously presented) The solar powered distillation system of claim 13, wherein the aluminum is an aluminum layer that is bonded to the polyisocyanurate insulation layer to form an integral sheet with structural rigidity and strength.

15. (original) The solar powered distillation system of claim 14, further comprising:

an extruded, sprayed-on, or molded impermeable membrane lining said basin.

16. (previously presented) A solar powered distillation system comprising:

adjustable legs attached to said solar powered distillation system for supporting and horizontally leveling the distillation system so that when material to be distilled is

placed in the distillation system it is equally distributed across a containment floor of the distillation system.

17. (previously presented) The solar powered distillation system of claim 16, further comprising:

a basin made of aluminum sided insulation and having said adjustable legs attached thereto;

an extruded, molded, or sprayed-on impermeable membrane lining said basin and forming the containment floor and containment sides of the basin.

18. (original) A solar powered distillation system comprising:

a carbon filter for removing volatile organic compounds.

19. (previously presented) The solar powered distillation system of claim 18, wherein the carbon filter is a silver impregnated activated carbon filter.

20. (original) The solar powered distillation system of claim 19, wherein the carbon filter is coupled to an inlet house.

21. (previously presented) The solar powered distillation system of claim 19, wherein the carbon filter is coupled to an outlet house.

22. (canceled)

23. (presented amended) A solar powered distillation system, comprising:

a basin for containment of a substance to be distilled, the basin including:

an outer protective shell made of a structurally rigid and durable material; and

one or more layers of insulating material formed over and attached to an inner surface of the outer protective shell; and

an extruded, molded or sprayed-on impermeable, substantially nonporous, silicone membrane placed over and attached to the one or more layers of insulating material so as to form a lining inside the basin that is impermeable to liquid and vapor of a substance to be distilled.

24. (previously presented) The solar powered distillation system of claim 23, wherein the membrane is an extruded silicone sheet that is cut, folded and adhesively attached to the insulating material.

25. (previously presented) The solar powered distillation system of claim 23, wherein the membrane is molded silicone that has been molded to fit a shape of the insulating material.

26. (previously presented) The solar powered distillation system of claim 23, wherein the membrane is formed by spraying silicone over the insulating material.

27. (previously presented) The solar powered distillation system of claim 24, wherein the membrane is adhesively attached to the insulating material and sealed at corners of the basin with silicone.